# BEFORE THE DELAWARE PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

LARRY FINNICUM OPERATIONS MANAGER SUEZ WATER DELAWARE INC.

Concerning
Operations & Capital Additions

February 2016

1		I. Introduction
2	Q.	What is your name and business address?
3	A.	My name is Larry Finnicum. My business address is 2000 First State
4		Boulevard, Wilmington, DE 19804-0508.
5		
6	Q.	By whom are you employed and in what capacity?
7	Α.	I am employed by SUEZ Water Delaware ("SWDE" or "the Company") as
8		the Operations Manager.
9		
0	Q.	Please describe your work experience.
11	A.	I started with Aqua America Inc. in Bryn Mawr Pennsylvania in 2003 as a
12		Continuing Property Records Analyst then in 2004 I was promoted to a
13		Rates Analyst. In 2006 I was then promoted to the Supervisor of Analytics
14		and Logistics. In 2010 I was promoted to the role of National Director of
15		Field Services. In 2011 I took on the role of Area Manager for Aqua North
16		Carolina in Denver, North Carolina.
17		
18		In September 2012 I was hired by SUEZ Water Pennsylvania to become
19		the Superintendent of the Bloomsburg and Dallas Operations. In 2014
20		accepted the position of Operations Manager for SWDE.
21		
22	Q	Have you previously testified before this or other regulatory
23		commissions in regards to a rate filing?

1	A.	No.
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3	Q.	Please describe your educational background.
4	A.	I have a Bachelor of Science Degree in Business Administration from
5		Drexel University in Philadelphia, Pennsylvania.
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7	Q.	What is the subject of your testimony?
8	A.	In addition to a general overview of the Company's operations, I will
9		present testimony on the following:
10		<ul> <li>The Company's efforts to control costs and maintain rate stability;</li> </ul>
11		<ul> <li>The Company's capital additions through the Test Period ("TP") for the</li> </ul>
12		twelve months ending June 30, 2016;
13		<ul> <li>Organizational changes within the Company since the last base rate</li> </ul>
14		case;
15		<ul> <li>The Company's customer service and customer satisfaction;</li> </ul>
16		The Company's educational efforts regarding conservation and the
17		value of water; and,
18		The proposed changes to the Company's tariff Rules and Regulations.
19		
20		II. Description of the Company
21	Q.	Please give a general description of SWDE
22	A.	SUEZ Water Delaware provides water service to approximately 38,000
23		customers in northern New Castle County, including portions of

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Wilmington, Newark, Bear, St. Georges and Delaware City. The transmission and distribution system is made up of 536 miles of water main, approximately 6,830 valves and 2,195 fire hydrants. The production system consists of two surface water treatment plants. The main source of supply is the Stanton Water Treatment Plant ("SWTP") which is rated at 30 MGD and it draws source water from the confluence of the Red and White Clay Creeks in Wilmington. The Christiana Water Treatment Plant ("CWTP") is rated at 6 MGD and it draws source water from Smalley's Delaware. The Company also has nine Christiana, Pond interconnections with area water suppliers. The interconnection with Chester Water Authority has a maximum capacity of 0.5 million gallons per day. An interconnection with SUEZ Water Bethel averaged 0.64 million gallons per day in 2014. Seven interconnections with the City of Wilmington with a combined capacity of 7.7 million gallons per day, dependent upon system pressures. SWDE owns and maintains 10 elevated tanks, 3 standpipes, 4 ground level reservoirs and 1 covered inground reservoir for a combined total storage capacity of nearly 30 million gallons. Additionally, SWDE has 13 booster stations strategically located throughout the system to maintain adequate pressures and serve these various storage facilities. The Company also operates an Aquifer Storage and Recovery facility (ASR) which allows 75 MG of water taken from SWDE's distribution system to be stored in an underground aquifer. This

1		water is then treated and pumped back to the distribution system to
2		augment water supply during periods of drought.
3		
4		III. Impact of Rate Change
5	Q.	When was SWDE last general rate filing?
6	A.	SWDE last filed for a general rate case on December 6 <sup>th</sup> 2010. The case
7		resulted in a 6.80% increase. The rates became effective September 20
8		2011.
9	Q.	How much does an average residential customer use per day and
10		what does that equate to on a cost per day under current rates?
11	Α.,	In 2015, a residential customer used approximately 133 gallons per day
12		which equated to eighty-four cents (\$0.84) per day.
13		
14	Q.	How would the Company's proposed increase impact the residential
15		customer?
16	$A_{x}$	The cost for 133 gallons per day for residential customer not including
17		existing surcharges would increase by approximately \$0.21 per day.
18		Considering the Company's last increase to base rates was in September
19		2011 and the proposed rates would not become effective until
20		approximately October 2016, SWDE's customers will have benefitted from
21		approximately five years of unchanged base rates.
22		

1	Q.	How does the SWDE's rate compare to the other Delaware class A
2		private water companies?
3	A.	Currently, SWDE's average residential customer bill based on 4,000
4		gallons per month is approximately 42% lower than the other Delaware
5		major private water companies.
6		
7		IV. Reduction in Consumption
8	Q.	Has the company seen a decrease in residential customer usage?
9		A. Yes, the Company has seen a steady decrease in residential
10		customers' usage over the past several years.
11		
12	Q.	What reasons do you attribute to this decrease in consumption?
13	Α	First it is important to understand that the decline in consumption is being
14		experienced across the water industry. Therefore a significant reason for
15		the decline can be attributed to new conservation appliances installed in
16		new homes as well as being replaced in existing homes. Another reason
17		is the Company's efforts to educate its customers about the benefits of
18		conservation. A third reason is the customer awareness that a reduction
19		in water usage translates to also a reduction in their wastewater cost.
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21	Q.	Do you foresee further decreases in consumption?
22	A.	Yes. This is a trend that water utilities across the country is experiencing.
23		SWDF has experienced a consistent decrease of approximately 2% in

residential usage for the last five years. The trend will continue for the following reasons: First there are many appliances in older homes that still need to be replaced. Second as the Company continues to educate customers on the value of conservation there will be further reductions. And thirdly customers have more information available to them regarding their usage so they can be more proactive in making decisions.

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#### Q. Has the Company seen a decrease in usage in other classifications?

Yes, the Company has seen a decline in usage in Industrial and Commercial classifications. Since its last general rate filing SWDE has experienced a decline in consumption of 10% in Industrial and 13% in Commercial. Most recently the Company was informed that a large industrial customer, DuPont Edgemoor will be closing. This customer represents 22% of the industrial classification consumption on an annual basis in 2014.

Q.

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#### V. Prudent Management of Costs and Promotion of Efficiency

Please describe how the Company has prudently managed its costs? The Company recognizes that overall costs are going to increase each year. Labor, materials costs, health insurance, etc. are some examples of annual cost increases that cannot be avoided or, even in some circumstances, mitigated. The Company also understands its responsibility to provide an excellent level of services to its customers.

Cutting costs simply to keep rates low is not an option where the public is dependent upon the quality and reliability of the services; therefore, the Company must find ways to operate more efficiently. The Company strives to continuously improve its service level by utilizing new technology, changing business processes, and continuing to invest prudently in its assets.

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#### Q. What does SWDE do to control and manage its chemical costs?

SWDE has found that the process of competitively bidding chemicals where possible and entering into annual supply contracts has been an effective method to control chemical expenses and manage cost volatility. In addition to focusing on costs, SWDE consistently reviews its treatment process to identify areas where changing chemicals can potentially reduce cost and improve or optimize the treatment process. As well, in 2015 SWDE began utilizing Chemtracker. Chemtracker is an in-house created spreadsheet for the Production department that, through tables and graphs, interprets the chemical data collected from our SCADA system and eOps. Data can be matched up against water quality parameters to show chemical usage during storm events, facility upsets, and just everyday normal demands. The used for projecting yearly budget requests also be tool can (decrease/increases). The tool is also used as a secondary look into eOps to make sure chemical level transducers are reporting properly and that the chemical inventory is accurate.

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2	Q.	Please describe the steps that the Company is taking to control energy
3		costs.
4	Α.	Two factors affect overall energy expenses, usage and price. Usage is
5		under management control while price is subject to market conditions. As
6		a result of its costs control measures, the Company has entered into
7		certain contracts for the purchase of energy utilized to provide water to
8		customers at favorable prices for kWh. In addition the Company has
9		installed VFDs (variable frequency drives) on process pumps as well as
10		booster pumps with in the distribution system. The VFDs assist in
11		controlling the energy usage for the pumps.
12		
13	Q.	Please describe the Company's energy requirements and contracts.
14	Α.,	The Company has three primary sites which are the Stanton Water
15		Treatment Plant, the Christiana Booster Station, and the Bellevue Booster
16		Station and they comprise approximately 90% of the kWh used by SWDE.
17		All of these locations have contracts for their kWh energy usage through
18		December 2016.
19		
20	Q.	Can you give a few examples of how the Company is utilizing new
21		technology to reduce costs, improve business efficiency, or meet
22		regulatory requirements?
23	Α	Yes. I will highlight the following four:

- 1. Irth One Call System The One Call "Irth" Software system was implemented in SWDE operations in 2015. This handheld device eliminated the paper process and is used in the field to clear and receive One Call locates, saving time and effort on a daily basis. This new software gives us the ability to take a picture before each dig and attach it to the ticket, track completed locates with a picture, and add pictures of damage to pipes if a hit occurs. Most important is the much-improved accurate record management for the Company's protection if questioned on one of our One Call locates or if the Company needs to pursue damage caused by another utility or outside contractor to our facilities.
- 2. Radio Read Meter Program The Company has a goal of having 100% of its customers installed with meters with remote radio reads. Currently about 82% of the Company's customers are equipped with radio read meters. This technology has multiple benefits. First it is a more efficient way of reading meters. Second it promotes both a sustainable and safety initiative by reducing the number of miles driven by employees. Customers benefit from the technology as well as it provides them with more information about their usage and leaks can be detected earlier. Finally it gives the Company access to information such as tampering, reverse flow, stopped meters etc.
- 3. Water Shed Control Plan SUEZ Water Delaware selected and was approved to use an innovative option offered by US EPA to attain compliance with more stringent water quality regulations focused on levels

of the water borne pathogen cryptosporidium. Called a Watershed Control Plan (WCP), the five year plan focuses investments in projects upstream from SWDE's water treatment facilities, to reduce the amounts of cryptosporidium entering our source water. Preventing cryptosporidium from entering source water is a far more sustainable approach, without increasing our plant's carbon footprint, than treating for it when it reaches our plant through the addition of expensive treatment processes, which ultimately would increase customers' rates.

4. Research and Innovation Alliance -SUEZ has funded a research and innovation project with the objective to assess the benefits of watershed management programs and water safety plans. They have selected the Stanton plant's Watershed Control Plan to be used as one of the case studies in this research project. The company has committed to complete this research in partnership with Stroud Water Research Center, Leigh University, and Crockett Consulting.

The first phase of this research project included a literature review of various reports and existing watershed management experiences to provide an overview of the state-of-the-art in watershed management. The goal of the second phase of this project is to determine if a suite of BMPs has an effect on reducing pathogen loading to a stream from a specific farm operation, in this case a concentrated animal feeding operation (or CAFO).

As part of a plan to meet new drinking water regulations, SWDE developed and implemented a Watershed Control Plan that included the application of BMPs at several dairy farms in the White Clay Creek (WCC) and Red Clay Creek watersheds to reduce pathogen loadings upstream of the Stanton plant intakes. One site in the WCC watershed has been selected as part of the case study to quantify the impact of BMPs on downstream water quality compared to a site without BMPs. This project is anticipated to be completed by the end of calendar year 2016.

Q.

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#### **VI. Customer Service Improvements**

Please describe the Company's ongoing efforts to measure and provide continuous improvement in the services that it delivers to its customers.

First, the Company conducts surveys to learn not only how the Company has performed but ways that it can improve customer satisfaction. In the 2015 survey, overall satisfaction with customer service averaged 94%.

In 2015, the Company completed over 415 hours of customer service training for its customer representatives and field technicians.

Another measurement of customer satisfaction is the number of informal and formal complaints the Company receives. In 2015, the Company had 4 billing informal complaints, 6 service informal complaints and there were no formal complaints.

1		See Minimum Filing Requirement for more detail on formal
2		complaints since the last rate proceeding.
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4	Q.	What other initiatives has the Company promoted to improve service
5		to its customers?
6	Α.,	The Company has, among other things, implemented the following
7		initiatives:
8		Monthly Billing - The Company in 2015 successfully transitioned
9		its residential customers form quarterly to monthly billing as well the
10		Company transitioned the remaining Commercial accounts to
11	100	monthly. Previously all other service categories were billed monthly.
12		The transition was done over a three month period to ensure a
13		smooth transition.
14		E-billing The Company offers e-billing to its customers. As of
15		2015, 8,820 customers are utilizing e-billing to realize a "Green"
16		solution to routine billing. E-billing adds a customer convenience
17		and reduces the cost of bill presentation. The Company also offers
18		direct debit and, as of 2015, there were 3,347 customers enrolled.
19		• Customer Inquiries The Company, utilizing its call center
20		located in Wilmington has set a goal of answering all customer calls
21		in less than forty-five (45) seconds. This is monitored on a weekly
22		basis. In 2015, customer calls were answered locally on an
23		average of twenty (20) seconds.

1		Abandoned Phone Call Rate The Company has set a goal for
2		having an abandoned phone call rate of three percent. This is
3		monitored on a daily basis and, in 2015; the Company had a rate of
4		three percent.
5	•	Meter Reading The Company has set a goal of obtaining 98% of
6		its customer meter reads on its first attempt. In 2015, the Company
7		had a 98% actual first read rate.
8	9	United Water Cares The Company maintains United Water
9		Cares assistance for those genuinely impacted by hard economic
10		times. In 2015, the Company provided \$6,669 of financial
11		assistance to seventy (70) customers. In 2014 the Company
12		provided a total of \$6,124 to sixty-four (64) customers and in 2013
13		the Company provided a total of \$5,130 to fifty-four (54) customers.
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15	Q.	Is the Company proposing something new to improve
16		customer service?
17	Α.,	Yes, currently when the customer pays their bill by credit card or
18		ACH, they incur a charge of \$1.99 which is paid directly to the
19		bank. In order to ease the burden on the customer, the Company is
20		proposing that these convenience fees be paid by the Company
21		and become part of its overall cost of services. The Company
22		believes that this will increase the number of credit card payments
23		by 25%. The impacts of this cost is discussed by Mr. Loy.

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#### VII. Customer Outreach and Education

### 3 Q. Please describe the Company's outreach program to customers.

The SUEZ outreach program to customers is multifaceted. We provide communication channels both inside and outside of the bill envelope. We provide a robust website and use social media channels to deliver important information. We helped create and sponsor a major environmentally themed annual special event in White Clay Creek State Park at which we have a booth. We produce twice annual newsletters and partner with the Wilmington Blue Rocks to promote our ET Index lawn watering conservation program at Frawley stadium. Inside the bill envelope we use bill messages directly printed on the bill to convey important information to customers. We use bill inserts (pamphlets) on topics like conservation and how to avoid frozen pipes in winter. Our website is extremely robust with Frequently Asked Question (FAQs) on subjects ranging from handling emergencies to bill paying options. Facebook and Twitter is used to convey timely information on water service and other issues in these increasingly smart device oriented times.

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#### VIII. Conservation Education

Q. Describe the Company's efforts to educate the public in conservation and the value of water.

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11	Q.	What organizational changes has the Company made to ensure that
10		IX. Personnel Requirements
9		serves.
8		currently promotes conservation awareness in the communities that it
7		conservation rate structure are some of the ways that SUEZ Water
6		dissemination through public event attendance, and residential
5		inserts, plant tours, conservation messaging on door hangers, information
4		Garden, EPA WaterSense partnership, conservation education billing
3		the annual ET Index lawn watering conservation education program, Rain
2		SUEZ Water Delaware. The SWDE website, online Conservation Guide,
1	A.	Customer education and outreach on conservation is a focal point at
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its operations remain current?

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Since the last rate case, the Company has strengthened its operations in two separate areas. First, two Maintenance Technicians were added. Second, an Environmental, Health and Safety ("EHS") Manager was added.

The two Maintenance Technicians were added in 2014 to address the Company's maintenance needs in regards to assets and equipment. Their primary responsibility is to service instrumentation, provide maintenance to pumps and small motors, and to assist in maintenance of electrical equipment and controls.

The new EHS Manager was hired in 2012 to lead the Company's safety and environmental programs. The Company has placed a high

1		commitment on environmental compliance and with placing a high priority
2		on ensuring the safety of each employee.
3		
4	Q.	Has the Company laid off any employees since the last base rate
5		filing?
6	Α.,	No. The Company has a trained and skilled workforce that it wants to
7		maintain.
8		
9	Q.	Has the Company eliminated or reduced any positions since the last
10		rate filing?
11	A.	Yes, the Company has eliminated the following positions: Accounting
12		Manager, Meter Reader, and one Transmission & Distribution Utility
13		Worker. These positions were eliminated through attrition as the Company
14		realized that their resources would be better aligned elsewhere with in the
15		operation.
16		
17	Q.	Is the Company planning on adding any new positions by the end of
18		the TP?
19	A.	Yes, we are in the process of interviewing for an Asset Management
20		Specialist which is necessary to improve the company's management of
21		its assets and to enhance the reliability and service provided to the
22		Company's 38,000 plus customers.

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1	Q.	Have this position been filled?
2	A.	No, the Asset Management Specialist is still being recruited.
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4		X. Quality and Reliability of Service
5	Q.	Has the Company had any informal or formal PSC complaints
6		regarding water quality or service issues since its last rate
7		proceeding?
8	Α,	No.
9		
10	Q.	Has the Company had any Tier One or Tier Two violations since its
11		last rate case proceeding?
12	Α.,	Yes, the Company has had two Tier Two violations since its last rate case
13		proceeding. One was in 2012 for an MCL violation in regards to adding
14		fluoride to the Aquifer Storage Recovery System and the other was in
15		2013 for an MCL violation in regards to average iron on a sample taken by
16		ODW in the Arden service area.
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18		XI. Capital Additions
19	Q.	Please discuss the Company's capital additions through the end of
20		the TP.
21	A.	SWDE Exhibit I is a list of capital improvement projects that were (1)
22		placed in service prior to the end of the historic test year, but still have
23		CWIP to be booked, (2) will be placed in service after the historic test year

1		but prior to the end of the TP Associated plant retirements, advances and
2		contributions, and costs to remove related to these projects are also
3		included in this Exhibit.
4		
5	Q.	Please describe the Company's project numbering system as
6		reflected in SWDE Exhibit I
7	A.	The projects are grouped by category. Each project is assigned an alpha-
8		numerical number. All projects start with the letter C; the next two digits
9		represent the year; the next letter signifies a specific category; and the last
10		three digits represent the project number. The various categories are "A"
11		for Source of Supply; "B" for Water Treatment; "C" for Pumping; "D" for
12		Transmission and Distribution; "E" for system storage; "G" for meters; "J"
13		for information technology; and "K" for general plant.
14		
15	Q.	How many projects are there over \$500,000 in the TP.
16	Α,	There are three (3) projects budgeted over \$500,000. They are as follow:
17		1. Filter Air Scour - \$1,634,000
18		2. Electrical Upgrades - \$695,000
19		3. Replacement Customer Meters - \$1,390,000
20		See Minimum Filing Requirements for details on each project.
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22	Q.	Can you please provide an overview of each project that is over
23		\$500,000?

1 A. Yes, they are as followed:

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- The Filter Air Scour Project was identified as a project during a 1. Master Plan Study conducted in 2015. Our consultant suggested that the existing surface sweep system for the filters does not do a thorough job because it cannot reach the entire filter bed due to it having a fixed circular motion in a square filter, and it does not fully penetrate the full depth of the filter media. Our consultant projects that an air scour system may reduce the Stanton Facility's backwash water usage by 10% to 40% and increase filter run times by 10% to 25%. This project is in the spirit and intent to optimize the treatment facility and minimize expenses while upgrading the By extending backwash cycles, operations can treatment process. minimize the amount of sludge produced and electric consumption. The much larger issue that is partially addressed with this project is the amount of backwash water used per cycle. Backwash water is drawn from the finished water clearwell. Each backwash cycle uses approximately 1 foot of a 5 to 6 foot operating range. This is particularly challenging because it limits the number of filters that can be washed in the event of an emergency as well as in daily production since the stored volume for distribution management is low. Reducing the volume of water needed for backwash should also be realized in chemical usage since it is treated water that is being used.
  - 2. The Electrical Upgrades project will deal directly with the electrical needs with in the operations. These needs will center mostly on Arc Flash

mitigation at various sites. The mitigation will to reduce the Arc Flash hazard at these sites to ensure the health and safety of our employees and contractors.

3. The Customer Meter Project will increase of ERT (Encoder Receiver Transmitter) Technology deployment from 75% to 100% saturation. This will involve changing out approximately 8,300 customer meters and installing ERT devices. The technology is used to transmit data from the water meters over a short range so that a utility worker can collect meter data without a worker physically inspecting each meter. This project has and will allow SWDE to read meters more accurately and efficiently. As well the project has supported the transition to monthly billing for the Company.

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#### XII. Changes to Treatment of Antenna Revenue

Please discuss the Company's stance on the management of their antenna lease contracts.

The Company has multiple antenna lease contracts with various cellular phone companies to lease space on elevated water storage tanks throughout our service territory. The Company is seeking to have the revenue from these contracts shared between the shareholders and the customers. The Company is seeking a 75 percent to 25 percent ratio respectively. While allowing these antennas on our tanks helps communities avoid construction of typically controversial cell towers in

1		their neighborhoods, these leases do come with the administrative issues
2		and burdens to our Company's operations.
3		
4	Q.	Please discuss the administrative issues the Company encounters in
5		the management of these contracts.
6	A.	The Company does experience from time to time issues centering around
7		security and reliability due to cellular phone company contractors and sub-
8		contractors working at and around our elevated tank facilities. As well
9		when the Company needs to perform elevated tank maintenance and
10		cleaning there is extra effort and coordination due to the fact that the
11		cellular antenna facilities in most cases need to be removed or relocated.
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13		XIII. Changes to Tariff Rules and Regulations
14	Q.	Please discuss the proposed changes to the Company's tariff Rules
15		and Regulations.
16	A.	The Company is proposing three significant changes to its tariff. The
17		three significant changes are as follows:
18		1. The Company is proposing to meter all new services
19		including private fire services. The current tariff does not require private
20		fire services to be metered. This change is necessary to ensure a
21		hundred percent of the water is metered.
22		2. The Company is proposing to change the due date on its
23		hills rendered to 20 days from the mailing date. Payments received after 5

days of the due date will be charged a penalty and subject to shut off pursuant to Del Title 26 Section 6.5.4.2.1

3. The Company is proposing existing private fire services that are not metered; the customer must notify the Company three business days prior to any testing of the fire flow system. The Company will determine the acceptable rate of flow for testing purposes. The Company will assess a charge of \$250 per fire flow test. A penalty charge of \$1,000 will be assessed for any fire flow test conducted without notifying the Company.

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#### XIV. Customer Notification of New Rates

Q. How will you inform customers of the rate case filing and the need to increase rates?

The Company will inform customers of our rate filing and subsequent hearings by publishing the required notices in the local newspaper and will also send each of its customers a notice by mail. This mailing will include the key facts and a link to Frequently Asked Questions (FAQs). We will also provide a bill (insert or message) to every customer. Additionally, we will provide informational letters to key stakeholders, including elected officials who represent districts that include areas that we serve, as well as our ten largest industrial customers. Internally, and in addition to our call center staff, all Company employees will be briefed on the rate filing and the drivers for the increase and provided with FAQ information. They will

also be provided with the name of a SUEZ Water Delaware contact in order to elevate any customer questions in the event that there are any customer inquiries that they are unable to answer. Finally, a news release, describing the rate request and the reasons for the request will be distributed to the news media to ensure that the facts of the case are accurately described. This news release will be posted on SWDE's website, with Facebook and Twitter being used to enhance customer awareness.

### 10 Q. Does this conclude your direct testimony?

11 A. Yes it does, thank you.

Project ID	Project Name	CWIP Balance as of 09/30/15	Plant Additions Oct 1 to Dec 31	Plant Additions Jan 01 to Jun 30	Total Cost without AFUDC	AFUDC	Total Cost	Month In-Service	Plant Account(s)	Retire Amount	Cost to Remove
C10K106	Generator Gas Conversion	31,9			31.9	0.0	31,9	Feb-16	32300		
C13D651	Piendak Construction-Transmission Bypass	0,3			0,3	0.0	0.3	Oct-14	34300		
C13J504	SCADA Network	25,0	106,8		131.8	0,0	131.8	Sep-15	39700		
C14B001	Traveling Screen Dechlorination- Total Project 223 4							Dec-15			
62,5%	Traveling Screen Dechlorination	50.4	139,6				139,6	Dec-15	33100		
37.5%	Traveling Screen Dechlorination	30.3	83.8				83.8	Dec-15	33200		
C14B002	Stanton Stage 2 Acid		0,2		0,2	0.0	0.2	Jan-15	33200		
C14J003	Asset Management	92.5	11.9		104,4	1.5	105.9	Feb-16	391AH		
C15A501	Traveling Screen Replacement		99.3		99.3	0.0	99.3	Dec-15	31300	102.5	3,0
C15B003	Plant Water Cross Connection Control		22.4		22.4	0.0	22.4.	Nov-15	33100		
C15B004	Densadeg Valve Actuators			106.0	106.0	0.0	106.0	Feb-16	33200		
C15B006	Lagoon Sludge Line Valve		3.0		3.0	0.0	3.0	Jan-16	33200		
C15B107 027 001	Air Scour One Filter	48.5		350.0	398.5	20.0	418.5	Apr-16	33200	5.0	0.2
C15B107 027 002	Air Scour- 11 Filters	145.4		1,040.0	1,185,4	30.0	1,215,4	Jun-16	33200	32.6	1,6
C15B501	Instrument Replacements		16.8		16.8	0.0	16.8	Apr-15	33200	5_0	
C15B501	Plug Valve Replacement		19.9		19.9	0.0	19.9	Dec-15	33100	15.0	3,5
C15B502	Stanton RW Flow Meter		121.3		121.3	0.0	121.3	Oct-15	33200	9.0	100.0
C15B509	Belt Press Bull Gear		0.6		0.6	0.0	0.6	Jul-15	33100		
C15B512	Production Meters		13.0		13.0	0.0	13.0	Dec-15	33100	4.4	
C15B518	Flash Mix#4 Gearbox Repl	0.3	50.0	7.7	58.0	0.0	58.0	Jan-16	33200	41.0	2.0
C15B518	Hydrogritter Overhaul #2	0,5	10,0	***	10.0	0.0	10.0	Dec-15	33200	6.6	0.8
C15B521	Plant 2-Service Lines Repl		2.3		2.3	0.0	2.3	Dec-15	33200	1,2	
C15B521	Stanton Hypo Pump Replace Parts	2.6	2.5		5.1	0.0	5.1	Dec-15	33200	3.6	
C15B522	#2 Belt Press Bull Gear Spare	2.0	4.1		4.1	0.0	4.1	Dec-15	33200		
C15B524	Belt Press 2 Conveyor		3.5	-	3.5	0.0	3,5	Nov-15	33200	1.5	
C15B524	Belt Press Polymer System Replacement	1.2	62,8		64.0	0.0	64.0	Dec-15	33200	28.1	5.0
C15C501	H.S. #5 Replacement In kind	6.6	18.6		25.2	0.0	25.2	Sep-15	32500		
C15C501	<del> </del>	1.8	10.9		12.7	0.0	12.7	Jul-15	32500	5.0	1.0
	Booster Pump Replacements	1,0	62.0		62.0	0.0	62.0	May-15	32500	40.0	2,5
C15C505	L S. Pump Bowl Repl	7,0	1.1	-	8.1	0.0	8.1	Nov-15	32500	5.5	1.8
C15C508	River Rd #2 Bstr Motor	0,4	6.6		7.0	0.0	7.0	Blanket	34800	3.5	1.0
C15D001	New Fire Hydrants -	3,2	108.3		111.5	0.0	111.5	Blanket	34300		
C15D002	New Short Mains & Valves -	3,2	27.6		27.6	0.0	27.6	Ongoing	34300		
C15D102	Bell Joint Clamps		223.6		223.6	0.0	223.6	Ongoing	34300		
C15D300	Extensions, Gross Roll Up	0.6	18.4		19.0	0.0	19.0	Blanket	34800	5.0	
C15D501	Replacement Fire Hydrants		30.9		34.2	0.0	34.2	Blanket	34300	7.5	
C15D502	Replace Short Mains & Valves	3,3 24.2	435.8		460.0	0.0	460.0	Oct-15	34300	9.4	2,3
C15D601	Emory Road	22.3	277.5		299.8	0.0	299.8	Oct-15	34300	8.6	1.0
C15D602	Deepwood Drive	22.3	325.0		325.0	0.0	325.0	Aug-15	34300	8,0	1.0
C15D603	Hull Ave	26.3	246.0		322.3	1.0	323.3	Dec-15	34300		
C15D652	Koppers Site Trans Main Leaks	76.3		10.6		0.0	22.6	Jun-16	34300	2.0	0.5
C15D653	Newport-20" Trans Valve Repl	1,0	3,0	18,6	22.6	0.0	6.5	Aug-15	34300	2,0	-
C15D654	White Clay Creek 20" Main Break	5.7	12.2		12.2	0.0	12,2	Dec-15	34200	1.0	0.8
C15E501	Tank Safety Upgrades		34.8		34.8	0.0	34.8	Nov-15	34200	2.0	1.6
C15E503	Newport and Graylyn Tank Upgrades	0.3			12.8	0.0	12.8	Blanket	34500	2,0	1.0
C15F001	New Domestic Services, Gross	0.3	12.5			0.0	32.0		34500	H	
C15F003	New Fire Services, Gross	0.2	31.8		32.0			Blanket	34500	5.0	
C15F501	Replacement Domestic Services	9,1	60.3		69.4	0.0	69,4	Blanket	34500	3,0	
C15G001	New Customer Meters	0,7	5.4		6.1	0.0	6.1	Blanket		25.0	25.0
C15G501	Replacement Customer Meters	44.8	788.7		833.5	0.0	833.5	Blanket	34600	25.0.	25.0
C15J001	State Line Remote Control	11.5	67.5		79_0	0.0	79.0	Dec-15	39700		

	Total	(238.1)	4,272.2	1,522.3	5,252.3	57.5	5,533.2			2,453.1	165.4
CD350	Category 2 Collections	(1.036.9)	(55.4)		(1,092.3)		(1,092,3)	Jun-16	33200		
C15K703	Building Equipment	0,2	3.4		3.6	0.0	3.6	Jun-15	33100		
	Office Furn/Comp hardware and software						0.0	Dec-15	39100	1,971.7	
C15K513	Stanton Train Rm Rooftop HVAC		10.0		10.0	0.0	10,0	Dec-15	39000	5.9	1
C15K512	Pump House #2 Electric Panel		187.0		187.0	0.0	187.0	Dec-15	31300	1.0	1
C15K511_	Electrical Panel PP-F Repl		10.0		10.0	0.0	10.0	Dec-15	33200	3.0	1
C15K510	Small Tools and Equipment		9.5		9.5	0.0	9.5	Apr-15	39400		
C15K509	Safety	0.2	1.7		1.9	0.0	1.9	May-15	39000		
C15K508	Bellevue Electric Replacement	55.6	359.4		415.0	5.0	420.0	Dec-15	32100	60.0	7
C15K507	HS#3 Switchboard Shutter Repl		0.1		0.1	0.0	0_1	Sep-15	33200		
C15K506	MCC#5 Main Feed Insulator Repl		1.7		1.7	0.0	17	Aug-15	33200		
C15K505	2000 Amp Breaker Replacement	1.8	7,3		9.1	0.0	9.1	Sep-15	33200		
C15K504	Pump House #1 Electric-	6,6	1.0		7.6	0.0	7.6	Nov-15	32500	4.1	
C15K503	Newport Tank Generator Repl		0,3		0.3	0.0	0.3	Jul-15	32300		
C15K106_027_001	Arc Flash Labeling		8.8		8.8	0.0	8.8	Dec-15	39800		
C15K102	EH&S Audit Findings - 2	9.7	2,3		12.0	0.0	12,0	Nov-15	32500	2.5	
C15K101	EH&S Audit Findings		29,3		29.3	0.0	29.3	Jun-15	32100		
C15J505	Itron MC3 RF Meter Reading		34.6		34.6	0.0	34.6	Dec-15	391A0	22.4	
C15J505	PLC Replacements	0.4	49.6		50.0	0.0	50,0	Nov-15	39700	6.0	
C15J503	Phone System IVR	74.1	0.9		75.0	0.0	75_0	Jan-16	39700		
C15J502	IT Infrastructure Improvements		1.2		1.2	0.0	1,2	Mar-15	39700		
C15J002 C15J502	Windows 7 for SCADA Computers  SCADA & VFD Boards	0.9	6_0 20.4		6.9	0.0	22,3	Dec-15 Aug-15	39700	5.0	

Test Period Capital Additions Forecast

Additions for projects started after end of Test Year (September 30, 2015)

Exhibit 1 Schedule 1 Witness: Finnicum

Project ID	Project Description	CWIP Balance as of 09/30/15	Plant Additions Jan 01 to Jun 30	2016 Plan	Test Year CAPEX	AFUDC	Final Cost	Month In-Service	Plant Account(s)	Retire Amount	Cost to Remove
	Solids Handling		448.2	448.2	448.2	15.0	463,2	Jun-16	33100		
	Lagoon Pump Upgrade	24.0	165.0	112.1	189.0	0.0	189.0	Jun-16	32500	10,0	1.0
	Flash Mix Sluice Gates		268,9	268.9	268.9	0.0	268,9	May-16	33200	100.0	30.0
	Electrical Equipment Updates	130.0	560.0	560.3	690.0	5.0	695,0	Mar-16	33200	350.0	20.0
	Stanton Building Upgrades		140_1	140,1	140_1	0.0	140.1	Feb-16	39000	50.0	5.0
	Chemical Analyzer Replacements		117,7	117.7	117.7	0.0	117.7	Mar-16	33200	50.0	
	Flash Mix Gearbox Repl.		168.1	168.1	168,1	0.0	168.1	Apr-16	33200	125.0	6.0
	Treatment Needs		168.1	336.2	168.1	0.0	168.1	Mar-16	33200	40.0	5.0
	Pumping Improvements- Replacements		56.0	112,1	56.0	0.0	56.0	Mar-16	32500	30,0	2.0
	Replacement Mains Highway-DOT		336.3	448.2	336.3	10.0	346.3	Jun-16	34300	10.0	1.0
	Replacement Distribution Mains		450.0	1,176.6	450.0	5.0	455.0	Jun-16	34300	15.0	1_5
	New Fire Hydrants -		2.8	5,6	2.8	0.0	2.8	Blanket	34800		
	New Short Mains & Valves -		224.1	448.2	224 1	0.0	224_1	Blanket	34300		
	Replacement Fire Hydrants		28.0	56,0	28.0	0,0	28.0	Blanket	34800	5.0	
	Replacement Short Mains & Valves		168.1	336.2	168.1	0.0	168.1	Blanket	34300	5.0	
	Extensions		372.1	744,2	372.1	0.0	372.1	ongoing	34300		
	New Domestic Services		41:7	83,4	41.7	0.0	41.7	Blanket	34500		
	New Fire Services		38.9	77.8	38.9	0.0	38,9	Blanket	34500		
	Replacement Fire Services		2.8	5.6	2.8	0.0	2,8	Blanket	34500		
	Replacement Domestic Services		112.1	224_1	112.1	0.0	112.1	Blanket	34500	5.0	
	New Customer Meters		16.8	33.6	16.8	0.0	16.8	Blanket	34600		
	Replacement Customer Meters		556.0	672,3	556.0	0.0	556.0	Blanket	34600	225.0	36.0
	Office Furn/Comp hardware and software						0.0		39100	1_971_7	
	OT Optimization		56.0	112,1	56.0	0.0	56.0	Mar-16	391A0		
	Electrical Equipment Recurring		112_1	112.1	112.1	0.0	112.1	Mar-16	33200	50,0	3.0
	NRW ( Equip/DMA/Prod Meters)		112.1	112.1	112.1	0.0	112.1	Mar-16	39400		
	Safety & Security		110.9	168,1	110_9	0.0	110.9	Mar-16	39000		
	General Plant & Facilities		112.1	224.1	112.1	0.0	112.1	Mar-16	39000	60.0	5.0
	Equipment		56,0	112.1	56.0	0.0	56.0	Mar-16	39400	25.0	2.0
	Hydro Excavator		392.2	392.2	392.2	0.0	392.2	Mar-16	39600		
CD350	Category 2 Collections		(103.7)		(103.7)		(103.7)	Mar-16	33200		
	Total	154.0			5,443.5	35.0	5,478.5			3,126.7	117.5